CLAIMS

1. A semiconductor device, comprising:

a plurality of semiconductor elements arranged on a substrate; and

a main current electrode which is arranged vertically to a surface of the substrate and apart from a neighborhood of said plurality of semiconductor elements, wherein

each of said plurality of semiconductor elements and said main current electrode are electrically connected.

2. The semiconductor device according to claim 1, wherein

each of said plurality of semiconductor elements and said main current electrode are connected by wire bonding.

3. The semiconductor device according to claim 1, wherein

said plurality of semiconductor elements are switching elements.

4. The semiconductor device according to claim 1,

further comprising

a thermal conductor member at a bottom of the semiconductor device, wherein

said plurality of semiconductor elements are directly or indirectly connected to said thermal conductor member so that they are thermally coupled.

5. The semiconductor device according to claim 4, wherein

said thermal conductor member is formed with a ceramic material.

6. The semiconductor device according to claim 1, wherein

said plurality of semiconductor elements are arranged in one row or a plurality of rows.

7. A semiconductor device including one or a plurality of semiconductor elements, comprising:

a substrate on which the one or the plurality of semiconductor elements are arranged;

a case that is arranged in a predetermined position relative to said substrate so that the one or the plurality of semiconductor elements are surrounded; and

a metal member on which a main current electrode

of the one or the plurality of semiconductor elements and a terminal for electrically connecting said semiconductor device and a circuit external to said semiconductor device are formed integrally, wherein

said metal member is arranged in a position apart from said substrate by using said case.

8. The semiconductor device according to claim 7, wherein

said metal member is arranged above the one or the plurality of semiconductor elements or a wiring pattern connected to the one or the plurality of semiconductor elements.

9. The semiconductor device according to claim 7, wherein

said metal member and the semiconductor device are electrically connected by wire bonding.

10. The semiconductor device according to claim 7, wherein:

said case includes a frame portion surrounding the one or the plurality of semiconductor elements; and

said metal member is fixed to the frame portion of said case.